

## PATENT ABSTRACTS OF JAPAN

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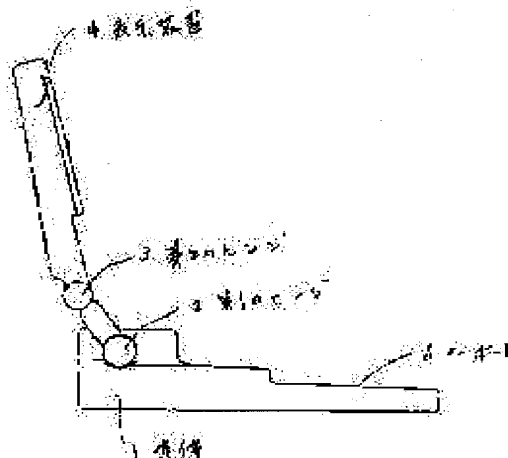
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## (54) PORTABLE ELECTRONIC EQUIPMENT

## (57)Abstract:

**PURPOSE:** To prevent any uncomfortable impression from being given to a party since the face of a user is hidden by a display part when preparing the minutes during a conference by providing two kinds of hinge parts between a main body and a display part.

**CONSTITUTION:** The torques of first and third hinges 2 and 3 are changed so that the position relation of a keyboard 6 and a display device 4 can be varied. Namely, since the vertical position of the display device 4 and the width between an operator and the display device 4 can be arbitrarily changed, it is not necessary for a little far-sighted person to use the equipment with any suitable distance between that person and the device and for high sitting height person to use the equipment with adjusting the height of chair and desk. Besides, the display device 4 can be used while being sufficiently inclined so that the unpoliteness is generated or uncomfortable feeling is given because the face of the operator is hidden by half by the display device 4 from the party during the conference at the time of preparing the minutes during the conference.



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**CLAIMS**

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[Claim(s)]

[Claim 1]In a portable electronic apparatus with which an indicator is raised at the time of operation, and a keyboard side is closed at the time of carrying, A main part in which main electronic parts for operating this portable electronic apparatus are carried, A connecting member for being near the back end of this indicator and attaching this indicator and this main part, A portable electronic apparatus, wherein this connecting member comprises the 2nd hinge region that has the 1st hinge region for having the torque beyond default value and supporting pivotally, enabling free rotation, torque of this 1st hinge region, and torque different [ beyond default value ], and is supported pivotally enabling free rotation.

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**DETAILED DESCRIPTION**

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[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention is carried and moved simply [ a notebook sized personal computer, a word processor, a workstation, etc. ], can be used, and can set up substantially the upper and lower sides and the front and back position of a display, an angle of visibility, etc. widely from elegance conventionally. Therefore, it is related with the portable electronic apparatus it was made to be possible [ whose key operation ], looking at a display under the service condition optimal for a user.

[0002]

[Description of the Prior Art]As shown by drawing 5, portable electronic apparatus, such as the personal computer and word processor of the conventional note type, and a workstation, a display, Since there was only one hinge in every one piece or the center at right and left, therefore an angle of visibility changed in 0 to about 120 degrees, adjustment of the position of the upper and lower sides of a display or a front and back position was impossible.

[0003]

[Problem(s) to be Solved by the Invention]However, if it was in such a conventional portable electronic apparatus, the position of those who operate a keyboard separated too much, keyboard grabbing became difficult, and the person liable to farsightedness was inconvenient in order to have to place and use the distance which is inevitably separated from a device. Next, the person with height sitting down high about a vertical position needed adjustment of the height of a chair or a desk. Since it is impossible to use a display, making it low enough when participating in a meeting, creating a conference note during a meeting, Its face was in the state which hides, brings a result which it becomes impolite or, to which it feels unpleasant, and can be hard to use it for conference note creation by the half on the display to the partner under meeting.

[0004]

[Means for Solving the Problem]In a portable electronic apparatus with which it is for this invention solving these technical problems, and an indicator is raised at the time of operation, and a keyboard side is closed at the time of carrying, A main part in which main electronic parts for operating this portable electronic apparatus are carried, A connecting member for being near the back end of this indicator and attaching this indicator and this main part, This connecting member provides a portable electronic apparatus which comprised the 2nd hinge region that has the 1st hinge region for having the torque beyond default value and supporting pivotally, enabling free rotation, torque of this 1st hinge region, and torque different [ beyond default value ], and is supported pivotally enabling free rotation.

[0005]

[Function]Thus, since the connecting member which raises an indicator in arbitrary positions by an operator from a main part, and is made possible comprises two or more hinge means, If the 2nd hinge is locked and used by making the 1st hinge into a fulcrum, will become the maintaining structure of a common display and, If the lock of the 2nd hinge is canceled and used, in two places, the 1st hinge and the 2nd hinge, a fulcrum will become combination, and the upper and lower sides, order, and an angle of

visibility can set up in the form which the user's service condition doubled.

[0006]

[Example] Hereafter, the example of this invention is described based on a drawing. Drawing 1 is a figure explaining the 1st example of use of the portable electronic apparatus of this invention, drawing 2 is a figure explaining the 2nd example of use of the portable electronic apparatus of this invention, drawing 3 is a figure explaining the 3rd example of use of the portable electronic apparatus of this invention, and drawing 4 is a figure explaining the housed state of the portable electronic apparatus of this invention.

[0007] in drawing 1 -- the portable electronic apparatus of this invention -- 1 -- the 2nd hinge and 4 are constituted the 1st hinge and 3, and a display and 5 comprise a keyboard for a personal computer body and 2 an attachment component and 6. Drawing 1 is an example in case an operator uses a display, lengthening it up.

Drawing 2 is a meeting etc., in order for its face to hide in a display and not to make a partner unpleasant, are a thing of a measure, enable it to use a display surface, putting it to sleep extremely, and drawing 3, In order to bend and use the 1st hinge for the personal computer body 1, the display 4 can use it, being able to bring close to the operator side.

It is the thing drawing 4 stores a display and it enabled it to carry, and this is the same storage method as the conventional type. Thus, this invention is made to change physical relationship of the keyboard 6 and the display 4 by changing the torque of the 1st hinge and the 2nd hinge. Therefore, by having made width of the vertical position of the display 4, and an operator and the display 4 arbitrarily changeable composition, inevitably, from a device, the person liable to farsightedness needs to place a suitable distance, and does not need to use it. It becomes unnecessary for a person with high height sitting down to also adjust the height of a chair or a desk. When carrying out conference note creation, its face hid half with the display 4, and it enabled it to use the display 4 to the partner under meeting, in a meeting, leaning it enough so that becoming impolite or feeling unpleasant may be lost. Although the example of use when having attached the maintaining structure by a double hinge to two right and left of a display by having made \*\*\*\* into the hinge mechanism which has different torque is shown, it is also possible to use it instead of two kinds of hinge mechanisms at one place, attaching in the center. In the above-mentioned example, the display 4 is stored, and a cellular phone and when moving, storage of the completely same display as a conventional system is possible. If the locking mechanism which can be especially held with a ball ball etc. between this 2nd hinge and the main part 1 is attached, temporary

fastening can be carried out with the main part 1 with the 2nd hinge, and also at the time of use, if necessary, it is usable with the conventionally same method as a device. That is, it is also the feature that it can be used only with the 2nd hinge.

[0008]

[Effect of the Invention]As explained above, in this invention, it had composition which has two kinds of hinge regions between a main part and an indicator.

Therefore, at the same time it enables it to use display portions, such as a personal computer of a portable note type, a word processor, and a workstation, according to the position with the most sufficient conditions of a user look, Operation by conditions which its face hides in a display portion at the time of the conference note creation under meeting, and do not give a partner an unpleasant impression etc. was enabled.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1]It is a figure explaining the 1st example of use of the portable electronic apparatus of this invention.

[Drawing 2]It is a figure explaining the 2nd example of use of the portable electronic apparatus of this invention.

[Drawing 3]It is a figure explaining the 3rd example of use of the portable electronic apparatus of this invention.

[Drawing 4]It is a figure explaining the housed state of the portable electronic apparatus of this invention.

[Drawing 5]It is a figure explaining the conventional portable electronic apparatus.

[Description of Notations]

1 Personal computer body

2 The 1st hinge

3 The 2nd hinge

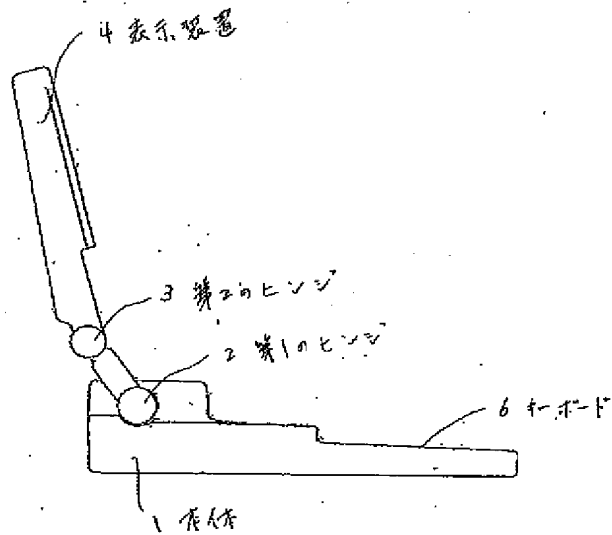
4 Display

5 Maintaining structure by a double hinge

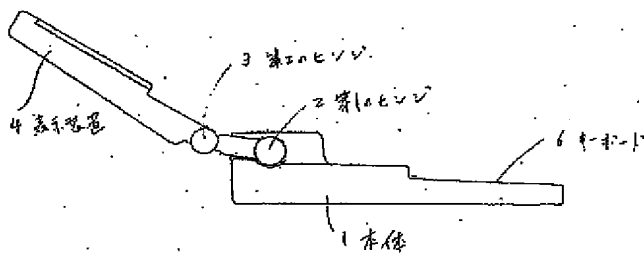
6 Keyboard

## DRAWINGS

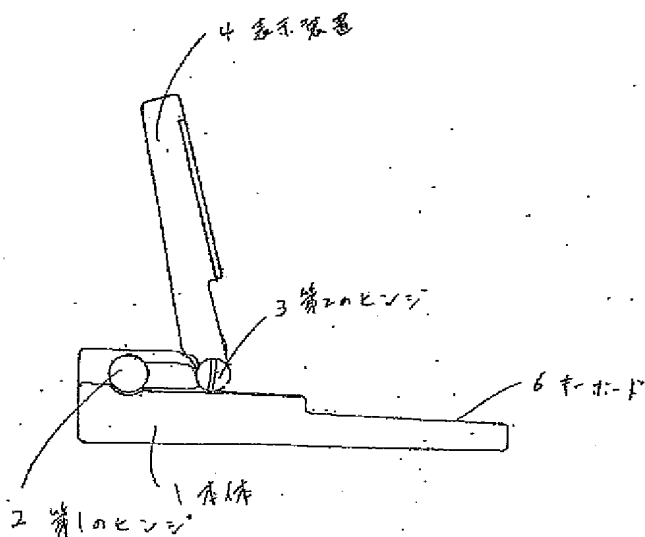
[Drawing 1]



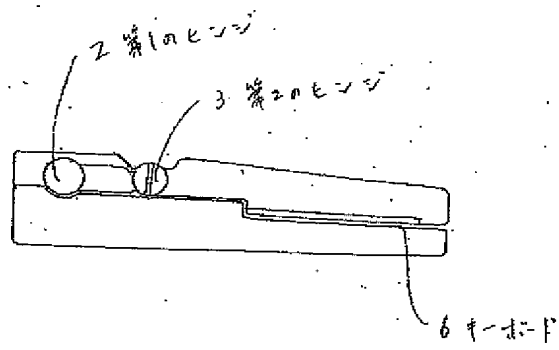
[Drawing 2]



[Drawing 3]



[Drawing 4]



[Drawing 5]

